

Amendments to the Claims

1. (Previously presented) A method for casting a plurality of blades having an airfoil and a root for securing the blade to a separate disk, the method comprising:

forming a plurality of mold sections each having internal surfaces for forming an associated at least one blade of the plurality of blades and for forming an associated feeding passageway;

assembling the plurality of mold sections;

assembling the plurality of mold sections with a single distribution manifold having a plurality of feeder conduits so that each feeder conduit mates with an inlet of an associated one of the feeding passageways; and

introducing a molten alloy to the assembled mold sections.

2. (Original) The method of claim 1 wherein:

the molten alloy is simultaneously introduced to the assembled mold sections.

3. (Original) The method of claim 1 wherein:

each of the mold sections has the internal surfaces for forming only a single such associated blade; and

the internal surfaces of each of the mold sections include first surfaces for forming an exterior of the associated blade and second surfaces for forming an interior of the associated blade.

4. (Canceled)

5. (Previously presented) The method of claim 1 wherein:

the molten alloy is introduced so as to settle to an upper level below a lower extreme of flow path portions through the manifold.

6. (Previously presented) The method of claim 1 wherein:

the distribution manifold comprises a manifold body having:
a pour chamber for receiving molten material; and
said plurality of feeder conduits, each extending from the pour chamber to the associated feeding passageway; and
the assembling comprises positioning each of a plurality of filters in an associated one of the feeder conduits.

7. (Original) The method of claim 1 wherein the forming of each of the mold sections comprises:

assembling a sacrificial blade pattern and a sacrificial gate form atop a plate;
applying a shell to the assembled blade pattern and gate form; and
heating the shell to melt at least a portion of each of the blade pattern and gate form.

8. (Currently amended) A method for casting parts comprising:

forming a plurality of mold sections, each section having internal surfaces forming one or more separate ones of said parts;

assembling a cluster of the mold sections ~~that have passed such inspection~~; and
assembling a distribution manifold to the cluster, the distribution manifold having:

a pour chamber for receiving molten material; and
a plurality of feeder conduits, each extending from the pour chamber toward an associated one or more of the assembled mold sections.

9. (Original) The method of claim 8 further comprising:

inspecting the mold sections and wherein the cluster is assembled from mold sections that have passed such inspection.

10. (Original) The method of claim 9 further comprising:

discarding one or more of the mold sections that have failed such inspection.

11. (Original) The method of claim 8 further comprising:

- pouring the molten material into the pour chamber; and
in a furnace, disassembling the manifold from the cluster and disassembling the cluster.
12. (Original) The method of claim 8 further comprising:
pouring the molten material into the pour chamber; and
permitting the molten material to solidify to consist essentially of a nickel- or
cobalt-based superalloy.
13. (Previously presented) A mold assembly comprising:
a plurality of mold sections; and
a distribution manifold assembled to the plurality of mold sections and having:
a single pour chamber in a first portion of the manifold for receiving molten
material;
a plurality of feeder conduits, each formed in a branch portion of the manifold,
unitarily formed as a common piece with the first portion and extending from the pour
chamber toward an associated one or more of the plurality of mold sections; and
a plurality of filters, each positioned in an associated one of the feeder conduits.
14. (Previously presented) The mold assembly of claim 13 wherein:
there are exactly three or exactly four such mold sections; and
there is a single such feeder conduit associated with each of the mold sections.
15. (Original) The mold assembly of claim 13 wherein:
each mold section comprises a molding cavity and a gate, the gate extending from a lower
end at the molding cavity to an upper end coupled to the distribution manifold.
16. (Currently amended) The mold assembly of claim 13 wherein:
the pour chamber is a centrally located[[,]] chamber.
17. (Previously presented) The mold assembly of claim 13 wherein:

sectional areas of the feeder conduits proximate the filters are dimensioned to provide metering of molten metal from the pour chamber.

18. (Previously presented) The mold assembly of claim 13 wherein:

the plurality of mold sections are separate and assembled to the manifold with distal portions of the branch portions extending into upper ends of feeding passageways in the mold sections.

19. (Previously presented) A mold assembly for molding a plurality of parts comprising:

a plurality of mold sections, each section having internal surfaces forming one or more separate ones of said parts; and

a distribution manifold assembled to the plurality of mold sections and having:

a pour chamber for receiving molten material;

a plurality of feeder conduits, each extending from the pour chamber toward an associated one or more of the plurality of mold sections; and

a plurality of filters, each positioned in an associated one of the feeder conduits.

20. (Previously presented) A mold assembly comprising:

a plurality of mold sections; and

a distribution manifold assembled to the plurality of mold sections and having:

a unitarily-formed body defining:

a single pour chamber for receiving molten material; and

a plurality of feeder conduits, each extending from the pour chamber toward an associated one or more of the plurality of mold sections; and

a plurality of filters, each positioned in an associated one of the feeder conduits.

21. (Previously presented) The method of claim 1 wherein:

the mold sections are assembled atop a chill plate.

22. (New) The method of claim 1 wherein:

each of plurality of blades is formed as a separate casting.

23. (New) The method of claim 1 wherein:

said internal surfaces of each of the mold sections form a mold cavity having a portion for forming the root of the associated blade.

24. (New) The method of claim 23 further comprising:

cooling the molten alloy; and

cutting away casting portions formed above the blade roots.

25. (New) The method of claim 1 further comprising:

removing the distribution manifold;

individually removing the filled mold sections.

26. (New) The method of claim 25 further comprising:

mechanically and/or chemically removing the mold sections from associated castings after said individually removing.

27. (New) The method of claim 1 further comprising:

cooling the molten alloy to leave an associated casting in a blade forming cavity and feeding passageway of each mold section

28. (New) The method of claim 1 further comprising:

cooling the molten alloy to leave an associated casting in a blade forming cavity and feeding passageway of each mold section, the casting not extending into the distribution manifold.